UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/493,338	01/28/2000	Jerome D. Toporek	16625-001110US	2127

7590	11/26/2003

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EXAMINER
PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
 after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
 earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _28 July 2003_ .

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
 closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1,3-13 and 22-26_ is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1,3-13,22-24 and 26_ is/are rejected.

7) ☒ Claim(s) _25_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _28 July 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

 If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a)☐ All b)☐ Some * c)☐ None of:

 1.☐ Certified copies of the priority documents have been received.

 2.☐ Certified copies of the priority documents have been received in Application No. _____ .

 3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
  application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

 a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _7_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1.   In the amendment filed July 28, 2003, Applicant has amended independent claims 1 and

9 to include further limitations, amended claims 3-6 and 8 to correct minor informalities,

canceled claims 2 and 14-21, and added new claims 22-26. In view of the amendment, claim 1 is

no longer objected to and the rejection of claims 2 and 8 under 35 U.S.C. 112 has been

overcome.

Response to Arguments

2.   Applicant's arguments with respect to claims 1, 9 and 23 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

4.   Claims 1, 3-13, 22-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent No. 6,415,329 to Gelman et al. in view of the article by Weaver entitled,

"Xpress Transport Protocol Version 4" (IEEE, October 1995).

        Regarding claims 1, 3, 4, 8, 9 and 22-24, Gelman teaches a communication apparatus

(e.g., FIG. 1) for transmitting packetized information, comprising a plurality of packets, each

comprising data and a header, over a satellite link (e.g., 14) in a telecommunications system

comprising a client (e.g., source/client 10; see also col. 7, line 31-32 regarding client/source), a server (e.g., destination/server 18; see also col. 7, lines 32-33 regarding destination/server), a first gateway (e.g., 12) connected to the client (e.g., 10) by a first telecommunications link (e.g., 20), a second gateway (e.g., 16) connected to the server by a second telecommunications link (e.g., 24), and a third telecommunications link (e.g., 22) connecting the first gateway (e.g., 12) to the second gateway (e.g., 16), and the apparatus comprising: a TCP network interface (e.g., 260 in FIG. 12) for linking the first gateway (e.g., CG) with the client (e.g., CLIENT); a satellite gateway interface (e.g., 262); a system memory (e.g., stored translation table; see col. 17, lines 29-44); and a bus (e.g., 301) interconnecting the network interface (e.g., 260), the satellite gateway interface (e.g., 262), and the system memory with a processor (e.g., SNAT module), the processor operatively disposed to: intercept a connection with the server (e.g., 18) initiated by the client (e.g., 10); establish a connection between the first gateway (e.g., 12) and the second gateway (e.g., 16) over the third telecommunications link; and provide a bi-directional flow of information from the client (e.g., 10) to the server (e.g., 18) and from the server (e.g., 18) to the client (e.g., 10) using the connection between the first gateway (e.g., 12) and the second gateway (e.g., 16), wherein the providing a bi-directional flow occurs transparently to the client and the server (e.g., see col. 8, line 59 – col. 12, line 16; and col. 17, line 22 – col. 20, line 14 regarding operation of SNAT module). While Gelman may not specifically disclose selecting a client and server from a plurality of clients and servers, Gelman uses an example of a single client and a single server for the purpose of clearly explaining the communication method. The method of Gelman, however, teaches improved communication over a high-delay bandwidth (e.g., satellite) *network* which implies more than one client and more than one server may be utilized.

Furthermore, the Examiner takes official notice that it is well known in the art of satellite

communications to select a client and server from a plurality of clients and servers.

Gelman further teaches converting a flow of information received from the client from a

first protocol into a second protocol prior to transmission over the third telecommunications link,

and converting a return flow of information from the second protocol into the first protocol prior

to transmission to the client, wherein converting the flow of information and the return flow of

information occurs transparently to the client and the server (e.g., see col. 2, line 34 – col. 4, line

9).

However, Gelman does not specifically teach both first and second protocols are

specifically transport layer protocols. Rather, Gelman teaches a preferred embodiment wherein

the first protocol is a transport layer protocol (e.g., TCP) and the second protocol is a link layer

protocol, specifically a special wireless link protocol for satellite communications (e.g., WLP).

Alternatively, Gelman further teaches the invention may be configured to convert among many

different type of protocols (e.g., see col. 31, lines 50-62). However, Gelman may not specifically

disclose the second protocol is specifically a transport layer protocol.

As discussed above, Gelman teaches a second protocol (e.g., WLP) is used for

communications via a satellite link (i.e., the third telecommunications link). By utilizing WLP as

the second protocol, however, Gelman admittedly suffers from not having guaranteed end-to-end

reliability (e.g., see col. 14, lines 35-51). Weaver teaches XTP and specifically, teaches the

advantages provided by XTP such as multicast capability, multicast group management, priority

capability, rate and burst control, selectable error control, selectable flow control and selective

retransmission, among others (e.g., see sections 3.1 to 3.13). Even more specifically, Weaver

teaches that features provided by XTP which are not provided by TCP are particularly desirable

for satellite link communications (e.g., see section 3.8). Particularly, XTP provides for selective

retransmission which provides much more efficient communications in high-delay bandwidth

networks such as satellite links. XTP is also a transport layer protocol having the same

interconnectivity as TCP (e.g., see abstract). Thus, applying the teachings of Weaver to the

system of Gelman would provide a system with improved satellite communications while further

providing improved end-to-end reliability with a 1:1:1 connection relationship. Accordingly, at

the time of the invention it would have been obvious to one of ordinary skill in the art to apply

the XTP teachings of Weaver to the system of Gelman wherein an XTP protocol is implemented

as the second protocol for communications via the satellite link in order to provide a system with

improved satellite communications while further providing improved end-to-end reliability.

Regarding claims 5-7, Gelman teaches converting comprises removing the header to

leave the data, i.e., portion of the flow information, substantially intact and encapsulating the

data using a satellite protocol header (e.g., see col. 5, lines 54-60; and col. 8, lines 17-20).

Gelman further teaches that additionally data may be compressed, encryption may be used, or the

system may be implemented without making any changes to the code (col. 5, lines 60-67),

although such compression and encryption steps are not required by Gelman but are merely

additional possible processes which may be implemented for particular purposes. Accordingly,

the teachings of Gelman implicitly comprise data being left substantially in tact, encapsulating

data with a header, and/or data being a portion of the flow of information.

Regarding claim 10, Gelman teaches the information comprises a client address and a

destination server address (e.g., see col. 26, lines 11-13 regarding addressing information; see

also cols. 7-31).

Regarding claims 11 and 12, Gelman further teaches transmitting a response (e.g.,

CONN_ACK) from the second satellite gateway to the first satellite gateway, and from the first

satellite gateway to the client, when the third communication connection with the destination

server occurs (e.g., see col. 26, line 63 – col. 27, line 6).

Regarding claim 13, Gelman further teaches transmitting a failure response (e.g.,

CONN_NAK) from the first satellite gateway to the client when the third communication

connection is lost (e.g., see col. 27, lines 7-16).

Regarding claim 26, Weaver teaches rate control is a feature of XTP (e.g., see section

3.4), and thus, an apparatus utilizing XTP would implicitly comprise a module for rate control.

Allowable Subject Matter

5.   Claim 25 is objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and

any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the

limitation of the processor of claim 23 further operatively disposed to extract an urgent pointer

from a packet header in the first transport protocol, and incorporate the urgent pointer into a

packet header in the second transport protocol for transmission over the telecommunications link

between the first and second gateways was not found in a search of the prior art.

Conclusion

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this
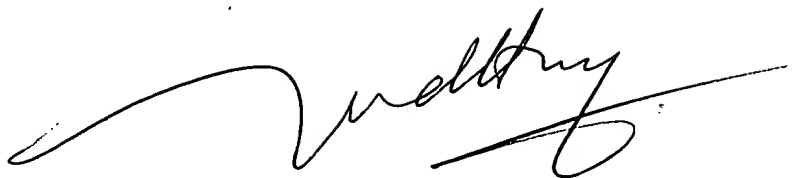
final action.

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The

examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone number for the

organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703.305.4750.

Justin M Philpott

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600